

<b>AWARD/CONTRACT</b>		<b>1. This Contract Is A Rated Order Under DPAS (15 CFR 700)</b>		<b>Rating</b> DOA4		<b>Page</b> 1 <b>Of</b> 32	
<b>2. Contract (Proc. Inst. Ident) No.</b> DAAE07-03-C-T074		<b>3. Effective Date</b> 2003NOV24		<b>4. Requisition/Purchase Request/Project No.</b> SEE SCHEDULE			
<b>5. Issued By</b> TACOM WARREN BLDG 231 AMSTA-AQ-ADBx CATHERINE BASTIAN (586)574-6950 WARREN, MICHIGAN 48397-5000  HTTP://CONTRACTING.TACOM.ARMY.MIL  <b>e-mail address:</b> BASTIANC@TACOM.ARMY.MIL		<b>Code</b> W56HZV		<b>6. Administered By (If Other Than Item 5)</b> DCMA BIRMINGHAM BURGER PHILLIPS CENTER 1910 THIRD AVE. NORTH, RM 201 BIRMINGHAM, AL 35203-2376		<b>Code</b> S0101A	
				<b>SCD C PAS S0101A3810APN ADP PT HQ0338</b>			
<b>7. Name And Address Of Contractor (No. Street, City, County, State, And Zip Code)</b> AXION CORPORATION 317 NICK FITCHEARD ROAD HUNTSVILLE, AL. 35806-3905   TYPE BUSINESS: Other Small Business Performing in U.S.				<b>8. Delivery</b> <input type="checkbox"/> FOB Origin <input checked="" type="checkbox"/> Other (See Below) SEE SCHEDULE			
				<b>9. Discount For Prompt Payment</b> Net 30 Days			
				<b>10. Submit Invoices (4 Copies Unless Otherwise Specified)</b>		<b>Item</b> 12	
<b>Code</b> 9X850				<b>Facility Code</b>		<b>To The Address Shown In:</b>	
<b>11. Ship To/Mark For</b> XU TRANSPORTATION OFFICER DDSP NEW CUMBERLAND FACILITY BUILDING MISSION DOOR 113 134 NEW CUMBERLAND PA 17070-5001		<b>Code</b> W25G1U		<b>12. Payment Will Be Made By</b> DFAS-COLUMBUS CENTER DFAS-CO/SOUTH ENTITLEMENT OPERATION P.O. BOX 182264 COLUMBUS, OH 43218-2264		<b>Code</b> HQ0338	
<b>13. Authority For Using Other Than Full And Open Competition:</b> <input type="checkbox"/> 10 U.S.C. 2304(c)( ) <input type="checkbox"/> 41 U.S.C. 253(c)( )				<b>14. Accounting And Appropriation Data</b> ACRN: AA 97 X4930AC9D 6D 26KB S20113 W56HZV			
<b>15A. Item No.</b> SEE SCHEDULE	<b>15B. Schedule Of Supplies/Services</b> CONTRACT TYPE: Firm-Fixed-Price	<b>15C. Quantity</b>	<b>15D. Unit</b>	<b>15E. Unit Price</b>	<b>15F. Amount</b>		
				KIND OF CONTRACT: Supply Contracts and Priced Orders			
<b>15G. Total Amount Of Contract</b>						\$84,900.00	
<b>16. Table Of Contents</b>							
(X)	Section	Description	Page(s)	(X)	Section	Description	Page(s)
<b>Part I - The Schedule</b>				<b>Part II - Contract Clauses</b>			
X	A	Solicitation/Contract Form	1	X	I	Contract Clauses	25
X	B	Supplies or Services and Prices/Costs	4	<b>Part III - List Of Documents, Exhibits, And Other Attachments</b>			
X	C	Description/Specs./Work Statement	6	X	J	List of Attachments	32
X	D	Packaging and Marking	11	<b>Part IV - Representations And Instructions</b>			
X	E	Inspection and Acceptance	13		K	Representations, Certifications, and Other Statements of Offerors	
X	F	Deliveries or Performance	19				
X	G	Contract Administration Data	21		L	Instrs., Conds., and Notices to Offerors	
X	H	Special Contract Requirements	22		M	Evaluation Factors for Award	
<b>Contracting Officer Will Complete Item 17 Or 18 As Applicable</b>							
<b>17.</b> <input checked="" type="checkbox"/> Contractor's Negotiated Agreement (Contractor is required to sign this document and return 2 signed copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)				<b>18.</b> <input type="checkbox"/> Award (Contractor is not required to sign this document.) Your offer on Solicitation Number _____ including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.			
<b>19A. Name And Title Of Signer (Type Or Print)</b>				<b>20A. Name Of Contracting Officer</b> JAMES E. NELSON NELSONJ@TACOM.ARMY.MIL (586)574-5258			
<b>19B. Name of Contractor</b>  By _____ (Signature of person authorized to sign)		<b>19c. Date Signed</b>		<b>20B. United States Of America</b>  By _____ /SIGNED/ (Signature of Contracting Officer)		<b>20C. Date Signed</b> 2003NOV24	
NSN 7540-01-152-8069 PREVIOUS EDITIONS UNUSABLE				25-106 GPO : 1985 0 - 478-632		Standard Form 26 (Rev. 4-85) Prescribed By GSA-FAR (4.8 CFR) 53.214(a)	

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b>  <b>PIIN/SIIN</b> DAAE07-03-C-T074 <b>MOD/AMD</b>	<b>Page</b> 2 <b>of</b> 32
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**Name of Offeror or Contractor:** AXION CORPORATION

SECTION A - SUPPLEMENTAL INFORMATION  
 NOTES FOR THIS PROCUREMENT:

1. SPECIAL PACKAGING REQUIREMENTS AND BAR CODE MARKINGS EXIST: AK12173263, PACKAGING LEVEL MILITARY A.
2. FOB POINT IS DESTINATION.
3. SUBJECT CONTRACTOR HAS AUTHORIZATION TO SHIP THE MATERIAL PARTS ON OR BEFORE 2004 APR 30, AT NO ADDITIONAL COST OF EITHER PARTIES.
4. DIMENSIONS (CLARIFICATION) FOR PART NUMBER 12355307, THE 41.74" AND 12.75" DIMENSIONS SHOULD BE TAKEN FROM THE NOTCHED EDGE OF THE EJECTOR.
5. BUILD TO APPLY ALL PART NUMBER MFR: 7M835 (BOURDONFORGE CO., INC 99 TUTTLE ROAD, MIDDLETOWN, CT 06457, COM. (860) 632-2740), MPN 1296 REPLACES "OBSOLETE" PART NUMBER MFR: 16007 (UNITED STATES FORGECRAFT CORP, FORT SMITH, AR 72901) MPN 353512-1. NOTE: THE UNITED STATES FORGECRAFT CO, CAGE 16007 IS NO LONGER IN BUSINESS.
6. THE CORRECT THICKNESS OF BRACKET PART NUMBER 12357154 IS 1.750 INCHES.

\*\*\* END OF NARRATIVE A 001 \*\*\*

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
A-1	52.204-4850 (TACOM)	ACCEPTANCE APPENDIX	FEB/2002

(a) Contract Number DAAE07-03CT074 is awarded to AXION CORPORATION CAGE 9X850. The Government accepts your proposal 08 JUL 2003 in response to Solicitation Number: DAAE07-03RT159, signed by ALEX LATIFI, GOV'T SALES (256) 851-9770.

- (b) The contractor, in it's proposal, provided the following data for the listed clauses in this contract:
- Section E, 52.246-4025, HIGHER-LEVEL CONTRACT QUALITY REQUIREMENT -- TACOM QUALITY SYSTEM REQUIREMENT: IS9000
- Section E, 52.246-4028, INSPECTION POINT: AXION CORPORATION, 317 NICK FITCHEARD ROAD, HUNTSVILLE, AL 35806 (256) 851-9770
- Shipping Characteristics: SPECIAL PKG SHEETS, SPI AK12173263, DTD 10 MAY 1989, REV. A
- Others: SEE PROCUREMENT NARRATIVES A001.

(c) Any attachments not included with this document will be provided by TACOM-Warren directly to the administrative contracting officer (ACO) via e-mail. A hard copy of the award will be sent to those ACOs not EDW (Electronic Document Workflow) capable. Technical data packages will be mailed by TACOM-Warren to the ACO on CD-ROM. Within one week of this award, any office not able to obtain these attachments from TACOM's website (<http://contracting.tacom.army.mil/>) and still requiring a copy, can request it by sending an e-mail message to the buyer listed on the front page of this contract.

CATHERINE BASTIAN BASTIANC@TACOM.ARMY.MIL (586) 574-6950

- (d) The following Amendment(s) to the solicitation are incorporated into this contract: ALL

[End of Clause]

A-2	TACOM	DISCLOSURE OF UNIT PRICE INFORMATION	DEC/2002
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This constitutes notification pursuant to Executive Order 12600, Pre-Disclosure Notification Procedures for Confidential Commercial Information (June 23, 1987), of our intention to release unit prices in response to any request under the Freedom of Information Act, 5 USC 552. Unit price is defined as the contract price per unit or item purchased. We consider any objection to be waived unless the contracting officer is notified of your objection to such posting prior to submission of initial proposals.

[End of Notice]

A-3	52.204-4016	TACOM-WARREN ELECTRONIC CONTRACTING	JUL/2003
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(TACOM)

(a) TACOM is now operating in an electronic contracting environment. All TACOM solicitations and awards are now distributed on the TACOM Warren Business Opportunities web page (<http://contracting.tacom.army.mil/opportunity.htm>) and are no longer available in hard copy. The TDPs and other documents, when available electronically, will be an attachment or linked to the solicitation package on the web. Please see submission guidelines at <http://contracting.tacom.army.mil/userguide.htm> and <http://contracting.tacom.army.mil/ebidnotice.htm> for more information. Any requirements included in the solicitation take precedence over guidance found on the TACOM contracting web page.

(b) You may need to use special software to view documents that we post on the home page. This viewing software is freeware, available for download at no cost from commercial web sites like Microsoft and Adobe. In cases where such software is required, we provide a link from our page to the commercial site where the software is available. Once you arrive at the software developer's site, follow their instructions to download the free viewer. You then can return to the TACOM home page.

(c) You are required to submit your offer, bid, or quote electronically. See the provision entitled "Electronic Offers (or 'Quotes' or 'Bids') Required in Response to This Solicitation (or 'Request for Quotations')" for more specific information.

(d) Any award issued as a result of this solicitation will be distributed electronically. Awards posted on the TACOM Warren Business Opportunities web page represent complete OFFICIAL copies of contract awards and will include the awarded unit price. This is the notice required by Executive Order 12600 (June 23, 1987) of our intention to release unit prices in response to any request under the Freedom of Information Act (FOIA), 5 USC 552. Unit price is defined as the contract price per unit or item purchased as it appears in Section B of the contract and is NOT referring to nor does it include Cost or Pricing data/information. If you object to such release, and you intend on submitting an offer, notify the PCO in writing prior to the closing date identified in this solicitation and include the rationale for your objection consistent with the provisions of FOIA. A release determination will be made based on rationale given.

(e) If you have questions or need help in using the Acquisition Center Home Page, call our Electronic Contracting Help Desk at (586) 574-7059, or send an email message to: [acqcenweb@tacom.army.mil](mailto:acqcenweb@tacom.army.mil)

(f) If you have questions about the content of any specific item posted on our home page, please call the buyer or point of contact listed for the item. Additional help is available to small businesses from Government-funded Electronic Commerce Regional Centers (ECRCs) to implement EDI. Information on ECRC is available at <http://www.ecrc.ctc.com>

[End of Clause]

A-4	52.209-4500 (TACOM)	QUALIFIED SUPPLIERS LIST REQUIREMENTS	MAR/2001
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(a) Only manufacturers on the TACOM Qualified Suppliers List (QSL) are eligible for award. As indicated on the TACOM Warren website below, QSL-01 applies to buys for Tracked Combat Vehicle Suspension Components and QSL-03 to Wheeled Vehicle Components. A qualified manufacturer is a concern who has met the requirements for qualification and whose name and business address have been entered on the applicable QSL. QSL status must be in place prior to any award pursuant to this solicitation whether or not the name of the manufacturer is actually included on the QSL. Contractors should contact the office designated below to arrange for qualification. Unless determined to be in the Government's best interest, this acquisition will not be delayed in order to provide an Offeror an opportunity to meet the standards specified for qualification.

(b) The provisions governing qualification, and the applicable qualification criteria may be viewed electronically at the following web site: <http://contracting.tacom.army.mil/qs1/qs1.htm>

(c) The requirement of this clause for status as a QSL concern at the time of award is in addition to, and does not abrogate, any requirement for an Offeror to provide a Qualified Products List (QPL) item when such a requirement is specified.

[End of Clause]

A-5	52.215-4854 (TACOM)	PAPERLESS ELECTRONIC RESPONSES REQUIRED IN RESPONSE TO THIS SOLICITATION/REQUEST	JUL/2002
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TACOM WILL NOT ACCEPT PAPER OFFERS IN RESPONSE TO THIS SOLICITATION/REQUEST. YOU ARE REQUIRED TO SUBMIT YOUR OFFER, BID, OR QUOTE VIA PAPERLESS ELECTRONIC MEDIA. SEE THE PROVISION ENTITLED "ELECTRONIC OFFERS (OR 'QUOTES' OR 'BIDS') REQUIRED IN RESPONSE TO THIS SOLICITATION (OR 'REQUEST FOR QUOTATIONS')" FOR MORE SPECIFIC INFORMATION.

[End of Clause]

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Name of Offeror or Contractor: AXION CORPORATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS  NSN: 2590-01-217-3263 FSCM: 19207 PART NR: 12355304 SECURITY CLASS: Unclassified				
0001AA	<p data-bbox="264 573 480 592"><u>PRODUCTION QUANTITY</u></p> <p data-bbox="264 653 758 724">NOUN: EJECTOR ASSY,BOLTED PRON: EH386563EH PRON AMD: 01 ACRN: AA AMS CD: 060011</p> <p data-bbox="293 758 776 829">NOTE: SEE PROCURMEENT NARRATIVE A001. IMPORTANT PART CHANGES/CLARIFICATION IN PART NUMBERS.</p> <p data-bbox="444 863 699 882">(End of narrative B001)</p> <p data-bbox="264 970 634 989"><u>Description/Specs./Work Statement</u></p> <p data-bbox="264 997 534 1041">TOP DRAWING NR: 12355304 DATE: 07-APR-2003</p> <p data-bbox="264 1102 501 1121"><u>Packaging and Marking</u></p> <p data-bbox="264 1129 724 1253">PACKAGING/PACKING/SPECIFICATIONS: API AK12173263 UNIT PACK: 1 INTERMEDIATE PACK: 0 LEVEL PRESERVATION: Military LEVEL PACKING: A</p> <p data-bbox="271 1289 829 1333">MARKING OF EXTERIOR PACK TO BE SHOWN IN ACCORDANCE WITH MILSTD 129.</p> <p data-bbox="444 1367 699 1386">(End of narrative D001)</p> <p data-bbox="264 1474 547 1493"><u>Inspection and Acceptance</u></p> <p data-bbox="264 1501 724 1520">INSPECTION: Origin ACCEPTANCE: Origin</p> <p data-bbox="271 1554 844 1732">Inspection/Acceptance at origin means that you MUST contact the DCMC to arrange for a Government inspection BEFORE you ship the supplies called out in this order. Failure to have the items inspected and accepted will result in their rejection at the destination. The rejected supplies will be returned to you at your expense.</p> <p data-bbox="444 1766 699 1785">(End of narrative E001)</p> <p data-bbox="264 1871 547 1890"><u>Deliveries or Performance</u></p> <p data-bbox="264 1898 844 1942">DOC SUPPL REL CD MILSTRIP ADDR SIG CD MARK FOR TP CD</p>	5	AY	\$ 16,980.00000	\$ 84,900.00

Name of Offeror or Contractor: AXION CORPORATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	001 W56HZV30861458 W25G1U J 3 <u>DEL REL CD</u> <u>QUANTITY</u> <u>DEL DATE</u> 001 5 30-APR-2004  FOB POINT: Destination  SHIP TO: <u>PARCEL POST ADDRESS</u> (W25G1U) XU TRANSPORTATION OFFICER DDSP NEW CUMBERLAND FACILITY BUILDING MISSION DOOR 113 134 NEW CUMBERLAND PA 17070-5001				

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SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
C-1	52.211-4015 (TACOM)	CONFIGURATION CONTROL - ENGINEERING CHANGES	JUL/2002

- (a) DEFINITIONS:
- (1) Engineering Change Proposal (ECP). An ECP is a suggestion that we (the Government) permanently change some requirement of the Technical Data Package (TDP). ECPs can be issued before or during contract performance. NOTE: The current Government Standard allows us ninety days to process routine ECPs. If you (the contractor) need a response in less than ninety days to meet contract requirements, you should consider submitting a deviation along with your ECP.
- (2) Request for Deviation (RFD). A RFD is a one-time request to deviate from TDP requirements. You must submit your deviation request before you deviate from the TDP requirements. You can request a deviation for a specific number of parts or the entire contract quantity.
- (3) Value Engineering Change Proposal (VECP). A proposal that --
- (i) Requires a change to the instant contract; and
- (ii) Results in reducing the overall projected cost to the agency without impairing essential functions or characteristics; provided, that it does not involve a change --
- (A) In deliverable end item quantities only;
- (B) In research and development (R&D) end items or R&D test quantities that is due solely to results of previous testing under this contract; or
- (C) To the contract type only.
- (4) Notice of Revision (NOR). A NOR describes the proposed changes to a technical document being requested by an ECP.
- (b) When will TACOM start processing change requests? TACOM won't start processing any ECP, VECP, or RFD until we receive the ACO's comments (see paragraph (e) below) and the ECP, VECP, or RFD documentation.
- (c) Contractor Responsibility. ECPs, VECs, and RFD shall contain information per the instructions outlined on the Data Delivery Descriptions (DDD) which can be found at the following website: <http://contracting.tacom.army.mil/engr/engrchange.htm>. Forms for preparing an ECP, VECP, or a RFD can also be found at this website. You may use other media, as long as you give us all the information outlined in the DDDs.
- (1) Identify the two-digit Weapon System Code (WSC) on your submittal. The WSC for this procurement is (IN).
- (2) The Contractor shall submit ECPs/VECPs/RFDs to the Government electronically. You must use one of the following electronic mediums: 100 megabyte Zip\*-disk, 3 1/2 inch disk, 650 megabyte CD ROM, or E-mail. (E-mail files must be sized 3.5 mb or less.) Identify the software application, and version, that you used to create each file submitted.
- (3) ECPs/VECPs/RFDs submitted in paper form are unacceptable and will be returned. You must use one of the following electronic formats:
- (i) Files readable using these Microsoft 97 Office Products: Word, Excel, PowerPoint, or Access. Spreadsheets must be sent in a file format that includes all formulae, macro and format information. Print image is not acceptable.
- (ii) Files in Adobe PDF (Portable Document Format).
- (iii) Files in HTML (Hypertext Markup Language). HTML documents must not contain active links to live Internet sites or pages. All linked information must be contained within your electronic ECPs/VECPs/RFDs and be accessible offline.
- (iv) Other electronic formats. Before preparing your ECPs, VECs or RFDs in any other electronic format, please e-mail the engineer, copy-furnished to the buyer and ACO, to obtain a decision as to the format's acceptability. Failure to e-mail the engineer to seek an alternate format's acceptability may result in rejection of your submission. All alternate methods must be at no cost to the Government. NOTE: The above formats may be submitted in compressed form using self-extracting files.
- (d) Submittal Procedures for ECPs/VECPs/RFDs.

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**Name of Offeror or Contractor:** AXION CORPORATION

- (1) Send one copy of the ECP, VECP or RFD in electronic format to your ACO.
- (2) Send one copy of the ECP, VECP or RFD in electronic format to the buyer listed on the solicitation/ contract document.

WARNING - Submit complete, legible, virus free packages per paragraphs 1 and 2 above, or we may return your ECP/VECP/RFD without processing them.

(e) ACO Responsibility. Within ten working days from the day you receive the contractor's request, the ACO must prepare Comments on the ECP, VECP, or RFD in electronic format, and forward it as follows:

ECPs, VECPS, and RFDs. Email a copy of the contractor's request and ACO comments (DD Form 1998) to the engineer (-2-) and the buyer identified in block 7 of the solicitation cover sheet (SF 33), block 5 on the Standard Form 26, or block 6 on the DD Form 1155.

(f) Approval of ECPs, VECPS and RFDs.

(1) ECPs should be used to make permanent changes in the Government Technical Data Package (TDP). Contractual relief should be requested using a Request for Deviation. This is because the Government requires more time to analyze any proposal to permanently change the specification or TDP. Cost saving improvements to the TDP should be submitted as a VECP, if a VE clause is contained in the contract.

(2) ECPs. TACOM will review and make a decision within the ninety day timeframe. Notification of our decision will be made by the contracting officer or representative.

(3) RFDs. Decision on RFDs will be made within 30 days from the date we receive them from the ACO.

(g) Processing Emergency and Urgent ECPs. Ordinarily, ECPs submitted by the contractor will be deemed routine. If you submit an ECP that you consider to be an emergency or urgent (as defined in paragraph 11 of DDD for ECPs), you must immediately notify the PCO. TACOM will review the criticality of the ECP, and, if we determine that it is urgent or critical, we'll follow the appropriate processing time-frames as outlined in paragraph 11 of the DDD for ECPs.

(h) Reminder - Only the PCO can change the Contract. NO OTHER GOVERNMENT REPRESENTATIVE is authorized to make a commitment for, or bind the Government.

(i) RFDs shall contain sufficient pricing data to determine if a downward equitable adjustment to the contract is required.

(j) Questions.

(1) Questions about preparation and submittal of change request should be directed to the Government Quality Assurance Representative (QAR).

(2) Questions about the status of change requests you've already submitted, contact the buyer. You can find the buyer's name, number and e-mail address in block 7 of the solicitation cover sheet (SF 33), block 5 on the Standard Form 26, or block 6 on the DD Form 1155.

[End of Clause]

C-2	52.211-4053	REQUIRED TAILORING LANGUAGE TO ELIMINATE CLASS I OZONE-DEPLETING	MAR/2000
	(TACOM)	SUBSTANCES (CIODS)	

(a) The purchase description or Technical Data Package (TDP) for this contract incorporates one or more specifications or standards that, in their unmodified form, either authorize or require the use of Class I Ozone-Depleting Substances (CIODS). For purposes of your performance on this contract, those specifications (which are identified in paragraph (b) of this clause) are modified by special tailoring language which appears in the TACOM Acquisition Center's web-site. Directions for reaching our web-site and locating the required tailoring language appear in paragraph (c) of this clause.

(b) Tailoring language to eliminate the authorization or requirement to use Class I Ozone-Depleting Substances (CIODS) is hereby incorporated into this contract by reference. Packaging Specifications MIL-L-61002 and MIL-STD-129, where they apply, are affected by this tailoring language. Other specifications and standards affected are: MIL-T-81533.

(c) The CIODS listing that contains the required tailoring language is on the TACOM Acquisition Center web-site, which you can reach by using this URL: <http://contracting.tacom.army.mil/ciods.html>

[End of Clause]

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C-3            52.246-4053            USE OF MIL-STD 1916            JAN/2001  
(TACOM)

The Government will not accept lots whose samples submitted for acceptance contain nonconformances unless appropriately documented and approved by the contracting officer. The contractor shall use MIL-STD-1916, DOD Preferred Methods of Acceptance of Product. The Verification Level (VL) shall be VL IV for major characteristics and VL II for minor characteristics. MIL-HDBK-1916 provides guidance on the use of MIL-STD 1916. This handbook is not contractually binding.

[End of Clause]

C-4            52.211-4008            DRAWING LIMITATIONS            NOV/2002  
(TACOM)

(a) The drawings supplied with this contract are not shop or process drawings. They are engineering design drawings. They are adequate to permit manufacture, and:

- (1) depict the completed item(s), and
- (2) serve as the basis for inspection of the completed item(s).

(b) These drawings DON'T cover intermediate drawings/specifications or steps in the manufacturing process. As a result, even if you meet all the dimensions and tolerances specified in the engineering design drawing for each individual part, a cumulative unacceptable fit for the contract item could result.

(c) YOU ARE RESPONSIBLE for producing the shop or process drawings needed to cover intermediate steps in the manufacturing process.

(d) The Contractor agrees that he has obtained all specifications and drawings necessary to manufacture the items being solicited in accordance with the TDP including all incorporated specifications and drawings. The contractor is responsible for having all drawings and specifications. Delivery delays are not excusable where the contractor asserts that it did not have a specification or drawing and has failed to request, in writing, the specification from either the Contracting Officer or Contract Specialist prior to the solicitation closing date.

(e) If you fail to produce an end item with a cumulative fit that conforms to Government drawings, specifications or other supplemental manufacturing documentation, you'll be responsible for correcting this condition at no additional cost to the Government and no delivery schedule extension.

[End of Clause]

C-5            52.211-4010            ACQUISITION OF SOURCE-CONTROLLED PART NUMBER ALT I            FEB/1998  
(TACOM)

Acquisition under this contract is restricted to:

- (1) The manufacturer's part number or numbers set forth in the Schedule or the Technical Data Package; and

(2) Other manufacturer's part numbers that are physically, functionally, and mechanically interchangeable with the manufacturer's part number(s) listed in the Technical Data Package; provided (i) that these nonlisted part numbers have been furnished to one of the approved manufacturers listed in the Technical Data Package, which firm has then, without making any changes in the characteristics or properties of the part, redesignated that part with one of the approved part numbers; and (ii) that firms tendering a nonlisted part number as described in this paragraph (2). have executed the provision entitled REPRESENTATION OF INTENT TO SUPPLY A SOURCE-CONTROLLED ITEM in Section K herein.

[End of Clause]

C-6            52.211-4010            ACQUISITION OF MANUFACTURER'S PART NUMBER: COMPONENTS            FEB/1998  
(TACOM)

One or more of the drawings for part of the contract item set forth in the Schedule and in the Technical Data Package specify manufacturer's part numbers. Since complete Government technical data for such part or parts are not available, it is understood that



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the Contractor, by accepting this contract, agrees to furnish only the listed manufacturer's part number(s) for those components of the contract item, except as provided in the provision entitled NOTICE REGARDING "SOURCE-CONTROLLED" COMPONENTS. (See Section L.) It is further understood and agreed that references to manufacturer's part numbers herein shall be deemed to include all changes or revisions thereto which the approved manufacturer has made effective as of the first date of delivery of any of the items under this contract; provided, that no change or revision that affects the interchangeability (ability to be interchanged with previous parts and to match with all mating parts when assembled) of the listed manufacturer's part shall be incorporated into the contract item without the prior written approval of the Procuring Contracting Officer.

[End of Clause]

C-7	52.211-4021 (TACOM)	WELDING SYMBOLS - CLARIFICATION OF GROOVE WELDING SYMBOL	APR/1995
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You must interpret welding symbols in accordance with AWS A2.4, except in the case of groove welds. In the case of groove welds, if the drawing doesn't specify an effective throat and/or weld size, interpret the dimension to the left of the groove welding symbol to mean both depth of preparation and effective throat/weld size.

[End of Clause]

C-8            52.246-4014            SUPPLEMENTAL STATEMENT OF WORK:    C = 0 SAMPLING PLAN            OCT/1995  
(TACOM)

(a) The following contract requirements replace all requirements for AQL-based sampling plans that appear in this contract's Technical Data Package (TDP) or specification, to include MIL-STD-105.

(b) The Government does not intend to accept non-conforming products from you unless appropriately documented and approved in advance, in accordance with this contract. To accomplish this objective you will perform the contract using the C = 0 Sampling Plan in paragraph (f) of this clause.

(c) One or more of the specifications, drawings and Quality Assurance Provisions (QAPs, QARs, SQAPs) contained in this contract require sampling in accordance with MIL-STD-105. MIL-STD-105 has been cancelled. Therefore, use the C = 0 Sampling Plan contained in this clause in lieu of MIL-STD-105 and any other Acceptable Quality Level (AQL)-based sampling plans required or referenced in the contract's drawings or specifications.

(d) You will use the C = 0 Sampling Plan for inspection of purchased and manufactured material where sampling plans are applied. You also will implement these requirements with your suppliers as new purchase orders are released in order to perform this contract.

(e) You may request approval of an alternative to this C = 0 Sampling Plan by writing to the Procuring Contracting Officer (PCO). Any written request must describe the proposed alternative plan in sufficient detail so that the PCO can evaluate your proposal. No such alternative has been accepted or approved until it has been formally accepted by the Procuring Contracting Officer, by means of a modification to this contract.

(f) The following chart, together with the annotations and notes that appear below it, apply in lieu of AQL requirements. Note that the "AQL" levels given at the top of the chart are for reference only.

C = 0 SAMPLING PLAN\*

	AQL	Major Tightened .65	Major Start 1.0	1.5	Minor Tightened 2.5	Minor Start 4.0	6.5	10.0	S2N
Lot Size									
2 - 8		ALL	ALL	ALL	5	3	2	2	2
9 - 15		ALL	13	8	5	3	2	2	2
16 - 25		20	13	8	5	3	3	2	2
26 - 50		20	13	8	5	5	5	3	3
51 - 90		20	13	8	7	6	5	4	3
91 - 150		20	13	12	11	7	6	5	3
151 - 280		20	20	19	13	10	7	6	3
281 - 500		47	29	21	16	11	9	7	3
501 - 1200		47	34	27	19	15	11	8	3
1201 - 3200		53	42	35	23	18	13	9	3
3201 - 10000		68	50	38	29	22	15	9	9

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10001 - 35000	77	60	46	35	29	15	9	9
35001 - 150000	96	74	56	40	29	15	9	9
150001 - 500000	119	90	64	40	29	15	9	9
500001 and Over	143	102	64	40	29	15	9	9
Major								
Lots Accepted	--**-->	--5-->	--5-->	--5-->	--5-->	--5-->	--5-->	
Lots Rejected	100% insp <--4--	<--1--	<--1--	<--1--	<--1--	<--1--	<--1--	<--1--
Minor								
Lots Accepted	N/A	N/A	--**-->	--5-->	--5-->	--5-->	--5-->	
Lots Rejected	N/A	N/A	100% insp <--4--	<--1--	<--1--	<--1--	<--1--	<--1--

N/A = Not Applicable

- \* Accept lot on 0 defects and reject lot on 1 defect.
- \* Characteristics identified as Major initially start at 1.0 AQL. Characteristics identified as Minor initially start at 4.0 AQL. However, the Historical record of accepted/rejected lots shall be used to determine the applicable sampling starting point.
- \* Level of inspection may be reduced 1 AQL for every 5 consecutive accepted lots.
- \* Level of inspection shall increase 1 AQL for every rejection to maximum of 1 AQL tighter than the starting AQL (i.e. Major Tightened = .65 AQL and Minor tightened = 2.5 AQL).
- \* 100% inspection shall be instituted if 4 lots are rejected, before 5 consecutive lots are accepted, while under tightened inspection.
- \*\* Move from 100% inspection to tightened after the cause for rejection has been identified and corrective action to eliminate the cause(s) and prevent its recurrence has been implemented.

[End of Clause]

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SECTION D - PACKAGING AND MARKING

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
D-1	52.211-4515 (TACOM)	PACKAGING REQUIREMENTS (SPECIAL PACKAGING INSTRUCTIONS)	SEP/2003

(a) Military preservation, packing, and marking for this contract shall be accomplished in accordance with the specific requirements identified below, all the applicable requirements of, MIL-STD-2073-1, Revision D, Dated 15 Dec 1999 and Notice 1, dated 10 May 2002, and the Packaging Documentation contained in the TDP.

- (1) LEVEL OF PRESERVATION: Military
- (2) LEVEL OF PACKING: A
- (3) QUANTITY PER UNIT PACKAGE: SPI AK12173263

(b) Unitization: Shipments of identical items going to the same destination shall be palletized if they have a total cubic displacement of 50 cubic feet or more unless skids or other forklift handling features are included on the containers. Pallet loads must be stable, and to the greatest extent possible, provide a level top for ease of stacking. A palletized load shall be of a size to allow for placement of two loads high and wide in a conveyance. The weight capacity of the pallet must be adequate for the load. The preferred commercial expendable pallet is a 40 x 48 inch, 4-way entry pallet although variations may be permitted as dictated by the characteristics of the items being unitized. The load shall be contained in a manner that will permit safe handling during shipment and storage

(c) Marking:

(1) In addition to any special markings called out on the SPI, all unit packages, intermediate packs, exterior shipping containers, and, as applicable, unitized loads shall be marked in accordance with MIL-STD-129, Revision P, Dated 15 Dec 2002, including bar coding. The contractor is responsible for application of special markings as discussed in the Military Standard regardless of whether specified in the contract or not. Special markings include, but are not limited to, Shelf-life markings, structural markings, and transportation special handling markings. The marking of pilferable and sensitive materiel will not identify the nature of the materiel.

(2) Contractors and vendors shall apply identification and address markings with bar codes in accordance with this standard. A Military Shipment Label (MSL) is required for all shipments except contractor to contractor. The MSL will include both linear and 2D bar codes per the standard. DVD shipment documentation must also be marked with additional bar codes. The DD Form 250 or the commercial packing list shall have additional issue/receipt bar coding applied as per Direct Vendor Delivery Shipments in the standard (except for deliveries to DLA Distribution Depots, e.g. New Cumberland, San Joaquin, Red River, Anniston).

(3) Contractor to contractor shipments shall have the address markings applied to the identification marked side of the exterior shipping container or to the unitized load markings. The following shall be marked "FROM: name and address of consignor and TO: name and address of consignee".

(4) Military Shipping Label: Military Shipment Labels may be created using the Computer Automated Transportation Tool Military Shipment Label/Issue Receipt Release Document (CATT MSL/IRRD). See the web site: <http://www.asset-trak.com/catt/catt.htm>. The software may be downloaded at: [http://www.asset-trak.com/catt/msl\\_irrd/msl\\_irrddownload.htm](http://www.asset-trak.com/catt/msl_irrd/msl_irrddownload.htm). Be sure to bookmark this page for future releases of CATT MSL/IRRD.

(d) Heat Treatment and Marking of Wood Packaging Materials: Boxes/pallets and any wood used as inner packaging made of non-manufactured wood shall be heat-treated. All non-manufactured wood used in packaging shall be heat treated to a core temperature of 56 degrees Celsius for a minimum of 30 minutes. The box/pallet manufacturer and the manufacturer of wood used as inner packaging shall be affiliated with an inspection agency accredited by the board of review of the American Lumber Standard Committee. The box/pallet manufacturer and the manufacturer of wood used as inner packaging shall ensure traceability to the original source of heat treatment. Each box/pallet shall be marked to show the conformance to the International Plant Protection Convention Standard. The quality mark shall be placed on both ends of the outer packaging, between the end cleats or end battens; on two sides of the pallet. Foreign manufacturers shall have the heat treatment of non-manufactured wood products verified in accordance with their National Plant Protection Organizations compliance program.

(e) This SPI has been validated and the method of preservation/packing has proven successful in meeting the needs of the military distribution system, including indeterminate storage and shipment throughout the world. Special instructions and/or tailoring of the SPI is detailed in the Supplemental Instructions below. A prototype package is required to validate the sizes and fit requirements of the SPI. Minor dimensional and size changes are acceptable provided contractor provides the PCO and ACO with notification 60 days prior to delivery. Any design changes or changes in the method of preservation that provide a cost savings without degrading the method of preservation or packing or affecting the serviceability of the item will be considered and responded to within 10 days of submission to

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PCO and ACO. Government reserves the right to require testing to validate alternate industrial preservation methods, materials, alternate blocking, bracing, cushioning, and packing.

(f) SUPPLEMENTAL INSTRUCTIONS: SPI AK12173263 DTD 1989 MAY 10 REVISION A

[End of Clause]

D-2 52.247-4016 HEAT TREATMENT AND MARKING OF WOOD PACKAGING MATERIALS JUL/2002  
(TACOM)

ALL NON-MANUFACTURED WOOD USED IN PACKAGING SHALL BE HEAT TREATED TO A CORE TEMPERATURE OF 56 DEGREES CELSIUS FOR A MINIMUM OF 30 MINUTES. THE BOX/PALLET MANUFACTURER AND THE MANUFACTURER OF WOOD USED AS INNER PACKAGING SHALL BE AFFILIATED WITH AN INSPECTION AGENCY ACCREDITED BY THE BOARD OF REVIEW OF THE AMERICAN LUMBER STANDARD COMMITTEE. THE BOX/PALLET MANUFACTURER AND THE MANUFACTURER OF WOOD USED AS INNER PACKAGING SHALL ENSURE TRACEBILITY TO THE ORIGINAL SOURCE OF HEAT TREATMENT. EACH BOX/PALLET SHALL BE MARKED TO SHOW THE CONFORMANCE TO THE INTERNATIONAL PLANT PROTECTION CONVENTION STANDARD. BOXES/PALLETS AND ANY WOOD USED AS INNER PACKAGING MADE OF NON-MANUFACTURED WOOD SHALL BE HEAT TREATED. THE QUALITY MARK SHALL BE PLACED ON BOTH ENDS OF THE OUTER PACKAGING, BETWEEN THE END CLEATS OR END BATTENS; ON TWO SIDES OF THE PALLET.

[End of Clause]

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SECTION E - INSPECTION AND ACCEPTANCE

	Regulatory Cite	Title	Date
E-1	52.246-2	INSPECTION OF SUPPLIES--FIXED-PRICE	AUG/1996
E-2	52.246-16	RESPONSIBILITY FOR SUPPLIES	APR/1984
E-3	52.242-4008 (TACOM)	ROUTING OF SPECIAL PROCESS APPROVALS	AUG/1994

(a) Specification MIL-STD-372, which is part of the technical data package for this contract, may require you to get approval from us prior to production for one or more special processes involved in producing this item. You are required to get prior approval unless the specification says otherwise.

(b) You will prepare the written procedures as the specification requires. You will then route the procedure through the Administrative Contracting Officer (ACO) for review and comment. Once you get the procedure back from the ACO, you will then forward it to the Procuring Contracting Officer (PCO) at TACOM for final approval. The correct address for the PCO is on the face page of this contract.

(c) You will cite (i) the contract number and (ii) the governing specification or standard on all procedures you submit for approval.

[End of Clause]

E-4	52.246-15	CERTIFICATE OF CONFORMANCE	APR/1984
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(a) When authorized in writing by the cognizant Contract Administration Office (CAO), the Contractor shall ship with a Certificate of Conformance any supplies for which the contract would otherwise require inspection at source. In no case shall the Government's right to inspect supplies under the inspection provisions of this contract be prejudiced. Shipments of such supplies will not be made under this contract until use of the Certificate of Conformance has been authorized in writing by the CAO, or inspection or inspection and acceptance have occurred.

(b) The Contractor's signed certificate shall be attached to or included on the top copy of the inspection or receiving report distributed to the payment office or attached to the CAO copy when contract administration (Block 10 of the DD Form 250) is performed by the Defense Contract Administration Services. In addition, a copy of the signed certificate shall also be attached to or entered on copies of the inspection or receiving report accompanying the shipment.

(c) The Government has the right to reject defective supplies or services within a reasonable time after delivery by written notification to the Contractor. The Contractor shall in such event promptly replace, correct, or repair the rejected supplies or services at the Contractor's expense.

(d) The certificate shall read as follows:

I certify that on \_\_\_\_ (date) \_\_\_\_, the \_\_\_\_ (insert Contractor's name) \_\_\_\_ furnished the supplies or services called for by Contract number \_\_\_\_ via \_\_\_\_ (Carrier) \_\_\_\_ on \_\_\_\_ (Identify the bill of lading or shipping document) \_\_\_\_ in accordance with all applicable requirements. I further certify that the supplies or services are of the quantity specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical item identification (part number), and are in the quantity shown on this or on the attached acceptance document.

Date of Execution: \_\_\_\_\_  
  
Signature: \_\_\_\_\_  
  
Title: \_\_\_\_\_

[End of Clause]

E-5	52.211-4016 (TACOM)	CARC PAINT-PRETREATMENT REQUIREMENTS FOR FERROUS AND GALVANIZED SURFACES	SEP/2002
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(a) Ferrous and galvanized surfaces shall be cleaned and pretreated with a Type 1, microcrystalline, zinc phosphate system per TT-C-490. Alternate pretreatment systems for ferrous substances must meet the performance tests specified in paragraphs 3.5.7, 3.5.8, 4.2.7, and 4.2.8 of TT-C-490. Corrosion resistance tests will be conducted on a monthly basis (two test coupons) after the process has

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been found to be in statistical control. Process control tests for alternative systems must ensure that the process remains in control and must be documented and approved by TACOM. Testing must be performed on the same substrate and the same thickness of primer minus topcoat used in production. Unless otherwise specified, MIL-P-53022 and -53030 primers shall be salt spray tested for 336 hours. All electrocoat primers shall be tested for 1000 hours. Test coupons shall be scrapped with a one inch (approximate) metal blade such as a putty knife between 24 and 168 hours after removal from the neutral salt spray cabinet for coupon evaluation. Any inorganic crystalline pretreatment is limited to a maximum build equivalent of 500 mg. per square foot to minimize chipping of the CARC system. All TT-C-490, zinc phosphate pretreatment systems must be documented and approved by the procuring activity prior to use. The procedure containing all the elements specified in paragraph 3.2 of TT-C-490 shall be submitted to the procuring activity no less than 45 days prior to use. Qualification will consist of verification that the process with its controls can meet the performance requirements in the specification. The performance of alternate systems must be demonstrated and approved by the procuring activity. If the TT-C-490 Type 1 system has not been previously approved by TACOM, it must be documented and submitted for approval as specified in the specification. Zinc phosphate systems for galvanized substrates require separate qualification. A list of TACOM approved facilities is available at <http://contracting.tacom.army.mil/engr/eng.htm>. These facilities are capable of meeting the performance requirements in the specification.

A list of previously qualified zinc phosphate application facilities is available from TACOM, Materials Engineering Team, (810) 574-5083. Requalification of the process will be required if the process is changed outside the limits defined in the TACOM letter of system acceptance provided to the application facility.

(b) Qualification of pretreatment systems for galvanized substrates shall be performed using Accelerated Corrosion Test protocol contained in GM 9540P, Method B, rather than salt spray. Test coupons with primer only shall be cured for seven days, and scribed thru the primer. After 40 cycle test exposure, the test coupons shall be scraped at a 30 degree contact angle (approximate) with a one inch (approximate) metal blade, such as a putty knife, both parallel and perpendicular to the scribe. There shall be no more than 3 mm. of rust creep (zinc corrosion products), blistering, or loss of paint adhesion from the scribe line and no more than 5 blisters in the field with non greater than 1 mm. This test shall be performed at two month intervals (two test coupons) to ensure that the process is in control. An alternative test for verifying process control is GM 9511P for 10 cycles.

(c) Performance tests for process control are highly dependent on the type, thickness, and VOC level of the organic coating (primer) film and its adhesion to the substrate. Any change to the solvents used in the primer or changing the brand of primer will require retesting of the system. The test coupons must duplicate the production painting process as closely as possible. Primer test coupons shall represent both the minimum and maximum nominal dry film thickness. Due to the wide variation in zinc thickness with the hot dip galvanizing process, the dry film thickness of the primer will be verified with a Tooke gage or equivalent for the purpose of production and process control.

(d) The use of vinyl wash primer (DOD-P-15328) is prohibited due to its hexavalent chromium content and high VOC level.

[End of Clause]

E-6                      52.211-4017                      ENHANCED CARC REQUIRMENTS FOR HIGH PERFORMANCE SYSTEMS                      SEP/2002

(a) THE FOLLOWING REQUIREMENTS SUPERSEDE THE PERFORMANCE REQUIREMENTS CONTAINED IN TT-C-490, MIL-C-5541 AND MIL-C-53072 RELATIVE TO THE ADHESION AND CORROSION RESISTANCE OF THE CARC SYSTEM:

(b) Ferrous and galvanized surfaces shall be cleaned and pretreated to provide the following level of performance on a repeatable basis. The cleaning/pretreatment/control process shall be documented and submitted to the procuring activity for approval prior to production. Qualification and process control testing shall be performed on the same substrate used in production. The system under test shall consist of the pretreatment and primer. There are significant variations in performance due to primer manufacturer, VOC content and primer thickness variation. Sufficient testing shall be conducted to achieve a statistical confidence in both the brand/type of primer used and the dry film thickness used in production. If the tolerance of the dry film thickness exceeds plus or minus 1.0 mil then you must qualify the extremes of the range separately.

(c) To verify the corrosion resistance, a minimum of three test panels per test variation no smaller than 4 x 12 inches with the pretreatment/primer system as noted above shall be subjected to 1000 hr. of neutral salt spray per ASTM B117 (40 cycles of GM 9540P - scribed is the preferred alternative) for ferrous substrates or 40 cycles of GM 9540P for galvanized surfaces. The test panels shall be cured for a minimum of 7 days and vertically scribed through the coating system to the metallic layer. A minimum of 24 hr. after the completion of the neutral salt spray test or within 5 days after completion of the GM 9540P test the scribe shall be scraped at a 30 degree (approximate) contact angle with a 38mm (approximate) blunt tipped metal blade such as a putty knife parallel and perpendicular to the scribe. There shall be no more than 3mm maximum loss of paint adhesion or corrosion at any point from the scribe line. In addition, there shall be no more than 5 blisters in the field with none exceeding 1mm; corrosion in the field shall not exceed Rust Grade 9 of ASTM D610. The minimum primer dry film thickness noted on the test panels which passes the corrosion resistance test shall be the minimum requirement for production painted hardware.

(d) To verify long term CARC adhesion, after completion of the corrosion resistance test evaluation each test panel will be subjected to cross hatch tape test (minimum tape adhesion rating of 45 oz. per inch of width). The test pattern shall be 4 x 4 scribe

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lines to the metallic layer at 2mm intervals(approximate) and shall be done no closer than 12 mm from any edge or the scribe creep. Multiple head cutters are not recommended. Loss of two or more complete primer squares shall constitute failure.

(e) The contractor must demonstrate the ability to pass both tests for the system to be considered acceptable. This testing shall be performed on 5 consecutive days of production. If all test panels are acceptable, the testing can revert to two test panels every two months of production.

(f) The only system that is currently available to achieve this level of performance is a zinc phosphate pretreatment system per TT-C-490 with a high quality primer. All primers used must be on the QPL for MIL-P-23377, 53022, -53030, or 53084. Not all QPL primers with the exception of electrocoat primers per MIL-C-53084 have this level of corrosion resistance/paint adhesion, however. New high performance, "Combat Grade" Powder Coat Primers will also meet this performance requirement. These primers can only be applied by approved applicators. The Specification controlling both the primers and their application are available upon request from AMSTA-TR-E/MEPS, (586) 574-5083.

Note: Hot dipped galvanized surfaces are highly prone to chlorine/chloride contamination from the galvanizing flux process. This contaminant must be removed for the coating system to pass these performance tests.

(g) For aluminum substrates the required pretreatment system is a chromate conversion per MIL-C-5541. If alternative pretreatment systems wish to be considered, they must demonstrate their ability to pass when coated with the nominal production primer (scribed) 120 cycles of GM 9540P. After completion of the test, the panels shall be scraped as noted above and shall have no more than 0.5mm of paint loss maximum from the scribe. In addition, there shall be no more than 5 blisters in the field with none larger than 1mm. After completion of the 120 cycle test, the cross hatch scribe test noted above shall be performed. The removal of one or more complete squares of primer shall constitute failure. The alternate system must demonstrate its ability to provide an acceptable product on 5 consecutive days of production to be considered a suitable alternative. The alternative process must be documented and approved by the procuring activity. Controls must be established to assure that the process remains under statistical control. The only alternative products which have demonstrated their ability to meet these requirements for 5000 and 6000 series aluminum alloys are Alodine 5200 and Alodine 5700.

(h) Failure to meet the corrosion resistance/adhesion requirements shall be cause for rejection of all production units manufactured during that production interval.

(i) Final Acceptance of the CARC Finish on Production Hardware:  
The dry film thicknesses of the primer and topcoat as well as coating adhesion on the fully cured primer/topcoat coating system are mandatory requirements. Variations in the primer thickness and curing conditions will dramatically affect recoat windows and coating performance for some primers. Manufacturing processes which are unable to control the dry film thickness to the requirements contained in Table V of MIL-C-53072 shall be subjected to the 4 x 4 cross hatch scribe test noted above on two production units per lot with two tests per unit. One test shall be conducted on a vertical and one on a horizontal surface (relative to the painting process). There shall be a maximum removal of one complete square of primer/topcoat or topcoat only. The polyurethane CARC topcoat requires approximately 24 days to completely cure at 68 Degrees F. To accelerate the curing for purposes of product acceptance, the following procedure may be followed: Cure at 190-210 degrees F for three hours (this is time at temperature and is, therefore, material thickness dependent) once the topcoat has reached a dry-to-touch condition. This is to be followed by 7 days at 65 degrees F minimum. Adhesion testing shall be performed only on a completely cured CARC finish. Contractors which have performed a thorough design of experiments methodology to evaluate the impact of paint system variables or have processes which meet Table V requirements can perform the final acceptance adhesion test on representative test coupons.

[End of Clause]

E-7	52.211-4030 (TACOM)	BASIC APPLICATION AND TESTING REQUIREMENTS FOR CHEMICAL AGENT RESISTANT COATINGS (CARC) ON METALLIC SURFACES	JAN/2003
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(a) Scope: The requirements contained herein apply whenever any or all of the following specifications are cited in the contract: MIL-C-46168, MIL-C-53039, MIL-PRF-22750, or MIL-DTL-64159.

(b) CARC Primers: The preferred CARC primer for all applications is cathodic, epoxy electrocoat per MIL-C-53084. This primer can be directly substituted whenever MIL-P-53022 or MIL-P-53030 is specified on a drawing or specification. The dry film thickness table below contains mandatory minimum and maximum dry film thickness requirements. Failure of production painted hardware to comply with these ranges will dramatically impact the corrosion resistance and/or chip resistance of the CARC coating system. If the contractor does not possess the personnel or equipment to meet these mandatory thickness requirements, then cathodic epoxy electrocoat must be used. Any part that has rust, heat treat or mill scale must be abrasive blasted prior to the application of any coating. Select powder coat primers which have 0.0 VOCs and 0.0 HAPS can also be used as a direct replacement for MIL-P-53022 and MIL-P-53030 primers. These powder coat primers, however, can only be applied by TACOM-approved applicators. The qualification and application of these primers is controlled by "Performance Standard for Combat Grade Powder Coat Paint - U.S. Army - TACOM" and is available at <http://contracting.tacom.army.mil/engr/eng.htm>

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(c) CARC Application: The dip application of any coating listed in the table below (with the exception of epoxy electrocoat which is specifically designed for dip application) is prohibited.

(d) End-Item Inspection. After the complete paint finish has been applied and cured\* (See note below), the Contractor shall test and inspect two units per lot for (i)workmanship, (ii) total paint film thickness and (iii) paint adhesion. Unless otherwise agreed to between the Contractor and the cognizant Government quality assurance representative, a lot shall be defined as all units submitted for final Government acceptance at one time. The use of test panels in lieu of actual production units is prohibited. At final inspection, the cumulative total paint film thickness of pretreatment, primer, and topcoat shall at a minimum conform to the sum of the minimum thicknesses for individual elements of the paint finish as specified in Table I herein. Sufficient locations shall be spot-checked to ensure proper workmanship and paint thickness uniformity. The size and configuration of the unit as well as the number of vendors responsible for the paint finish of component parts shall be taken into consideration in determining the number of locations to be checked. The specific number of test locations shall be agreed to by the cognizant Government quality assurance representative in advance. In addition, two locations on each sample unit shall be selected conduct the scribe tape test. The test locations shall be routinely varied among the following:

- (1) Directly adjacent to a weld.
- (2) On or directly adjacent to a machine cut or sheared edge.
- (3) On any mechanically formed surface when lubricants/drawing compounds were used.
- (4) On paint touch-up areas.

The precise location for each scribe tape shall be in an inconspicuous location that has been accepted by the cognizant Government quality assurance representative before the test is conducted.

Upon completion of the scribe tape test, the scribe marks shall be feathered into the adjacent area and touched up with the required top coat so that the tested area again conforms to the applicable minimum specified in Table I herein.

\*NOTE: The complete paint finish is defined as the pretreatment, primer, and topcoat applied to the substrate. Curing of the complete paint finish is dependent upon temperature, humidity, and paint film thickness. The time necessary to achieve sufficient adhesion to pass the scribe tape test must be determined by each facility. For purposes of this test, curing at ambient temperature will take 24 days. To accelerate the curing for purposes of product acceptance, the following procedure may be followed: Cure at 190 to 210 degrees F. for three hours (this is time at temperature and is therefore material thickness dependent), followed by 7 days at 65 degrees F. minimum.

- (e) Test Methods:
- (1) Film Thickness. Film thickness shall be verified with a nondestructive film gage. The gage shall be suitable for measurements over the applicable substrate material and shall have sufficient accuracy to ensure compliance to the thickness limitations. The gage shall be capable of being calibrated. If no other calibration specification or requirement is identified elsewhere in this contract, then the gage shall be calibrated in accordance with ISO 10012.
  - (2) Scribe Tape Test. The following test procedure shall be followed. The test surface shall be sufficiently warm and dry to ensure adhesion of the tape. All dimensions cited in this Scribe Tape Test description are approximate:
    - (a) Scribe four one-inch lines completely through the paint finish to the substrate, one sixteenth to three thirty-seconds of an inch apart.
    - (b) Scribe four additional one-inch lines, completely through the paint finish, one sixteenth to three thirty-seconds of an inch apart, rotated 90 degrees with respect to the first set of lines. The resulting pattern shall contain nine squares.
    - (c) Press a length of A-A-1830, A-A-884, or any commercially available tape with a minimum adhesion rating of 45 oz. per inch of width firmly over the scribed pattern, rubbing out all air pockets.
    - (d) Wait ten seconds, minimum. Grasp a free end of the tape and at a rapid speed strip it from the paint surface by pulling the tape back upon itself at 180 degrees.

NOTE: The above two tests are not a substitute for corrosion test such as neutral salt spray or accelerated corrosion tests which verify coating durability.

- (f) Acceptance Criteria:
- (1) Film Thickness. All applicable surfaces shall have complete paint coverage. A minimum of 75% of the applicable surfaces of each test unit shall meet the minimum, cumulative dry film thickness requirements. Failure of either test unit shall result in rejection of the production lot that it represents.



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DRY FILM THICKNESS TABLE

SPECIFICATION	DRY FILM THICKNESS (Mils) (MANDATORY RANGE)
DOD-P-15328*	0.3 - 0.5
MIL-PRF-23377	1.0 - 1.5
MIL-P-53022, Type I	1.0 - 2.5
MIL-P-53022, Type II	1.5 - 2.5
MIL-P-53030	1.5 - 2.5
MIL-P-53084	0.8 - 1.5
MIL-C-22750	1.3 - 2.5
MIL-C-46168	1.8 MINIMUM
MIL-C-53039	1.8 MINIMUM
MIL-DTL-64159	1.0 MINIMUM

\* May not be allowed per contract due to VOC and hexavalent chromium content.

(2) Scribe Tape Test (Adhesion). The removal of two or more complete squares of top coat, or top coat-primer-pretreatment coating, from either test unit constitutes test failure and the production lot from which it comes is rejected. Removal of overspray does not constitute test failure.

NOTICE: The scribe tape test is designed to detect any major deficiency in the paint application process that would affect the durability of the CARC finish. Typical causes of failure are:

- (a) Inadequate cleaning of the substrate.
- (b) Contamination of the surface between coatings.
- (c) Excessive paint film thickness in a single coating application.
- (d) Application of a coating over a previous coating which has not been adequately cured.

[End of clause]

E-8	52.246-4025 (TACOM)	HIGHER-LEVEL CONTRACT QUALITY REQUIREMENT--TACOM QUALITY SYSTEM REQUIREMENT	OCT/1997
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(a) As the contractor, you shall implement and maintain a quality system that ensures the functional and physical conformity of all products or services you furnish under this contract. Your quality system shall achieve (i) defect prevention and (ii) process control, providing adequate quality controls throughout all areas of contract performance.

(b) Your quality system may be based on (i) international quality standards such as the ISO 9000 series, or (ii) military, or (iii) commercial, or (iv) national quality standards. You represent that your performance under this contract will be in accordance with your quality system, which is in compliance with:

- [ ] ISO 9001
- [ ] ISO 9002
- [ ] QS 9000
- [ ] ANSI/ASQ Q9001
- [ ] ANSI/ASQ Q9002
- [ x ] Other, specifically ISO 9000 SERIES EQUIVALENT & MIL-I-45208 & MIL-Q-9854

(Note: if you check the "Other" block because you intend to use an in-house quality system, or one based on a commercial, national, or international system not identified above, then in addition to identifying your proposed system in the space above, to the right of the word "Other," you must attach a description of this system to your offer in response to the solicitation, so that we can assess its suitability. If you receive a contract award, your proposed system will be required by the contract.)

(c) Certification of compliance or registration of the quality system you identify above, by an independent standards organization or auditor, does not need to be furnished to us under this contract. However, you may attach a copy of such certification with your offer in response to the solicitation, as proof of system compliance.

(d) At any point during contract performance, we have the right to review your quality system to assess its effectiveness in

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**Name of Offeror or Contractor:** AXION CORPORATION

meeting contractual requirements.

[End of Clause]

E-9      52.246-4028      INSPECTION POINT: ORIGIN      FEB/1994  
(TACOM)

We will inspect the supplies as described elsewhere in this solicitation/contract before acceptance.    Fill-in the location, contractor's or subcontractor's plant, where origin inspection will occur.

CONTRACTOR'S PLANT:    \_\_\_\_\_  
AXION CORPORATION, 317 NICK FITCHEARD ROAD, HUNTSVILLE, AL 35806 (256) 851-9770

[End of Clause]

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SECTION F - DELIVERIES OR PERFORMANCE

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
F-1	52.242-17	GOVERNMENT DELAY OF WORK	APR/1984
F-2	52.247-34	F.O.B. DESTINATION	NOV/1991
F-3	52.247-48	F.O.B. DESTINATION--EVIDENCE OF SHIPMENT (DEVIATION)	FEB/1999
F-4	52.242-4009 (TACOM)	ACCELERATED DELIVERY--NOTICE OF SHIPMENT	FEB/1998

(a) You must send a notice of shipment in accordance with FAR 52.242-12 REPORT OF SHIPMENT when:

-- You accelerate delivery, and

-- The accelerated delivery increment exceeds 20% of this contract's total delivery quantity.

(b) This clause doesn't relieve you of any other obligations or requirements of FAR 52.242-12, or of this contract. See the specific delivery schedule clause in the Schedule of this contract (which may also be given elsewhere in this Section F) to determine if acceleration is acceptable and under what conditions.

[End of Clause]

F-5	52.247-4017 (TACOM)	DEPOT ADDRESS FOR THE APPLICABLE MODE OF SHIPMENTS: IN-THE-CLEAR ADDRESSES	JAN/2001
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<u>Rail/ Motor SPLC*</u>	<u>MILSTRIP Address Code</u>	<u>Rail Ship To:</u>	<u>Motor Ship To:</u>	<u>Parcel Post Mail To:</u>
206721/ 209405	W25G1U	Transportation Officer Defense Dist Depot Susquehanna New Cumberland, PA	Transportation Officer Defense Dist Depot Susquehanna New Cumberland, PA	Transportation Officer Defense Dist Depot Susquehanna New Cumberland, PA 17070-5001
875670/ 875675	W62G2T	Transportation Officer XU Def Dist Depot San Joaquin 25600 S Chrisman Rd Rec Whse 10 Tracy, Ca 95376-5000	Transportation Officer XU Def Dist Depot San Joaquin 25600 S Chrisman Rd Rec Whse 10 Tracy, Ca 95376-5000	Transportation Officer Dist Depot San Joaquin P O Box 96001 Stockton, CA 95296-0130
471995/ 471996	W31G1Z	Transportation Officer Anniston Army Depot, Bynum, AL	Transportation Officer Anniston Army Depot, Bynum, AL	Transportation Officer Anniston Army Depot, Anniston, AL 36201-5021
209741/ 209770	W25G1R	Transportation Officer Letterkenny Army Depot, Culbertson, PA	Transportation Officer Letterkenny Army Depot, Chambersburg, PA	Transportation Officer Letterkenny Army Depot, Chambersburg, PA 17201-4150
661136/ 661157	W45G19	Transportation Officer Red River Army Depot, Defense, TX	Transportation Officer Red River Army Depot, Texarkana, TX	Transportation Officer Red River Army Depot, Texarkana, TX 75507-5000
764538/ 764535	W67G23	Transportation Officer Tooele Army Depot, Warner, UT	Transportation Officer Tooele Army Depot, Tooele, UT	Transportation Officer Tooele Army Depot, Tooele, UT 84074-5003

\*\*\*SPLC indicates Standard Point Locator Code.

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NOTE: The following is applicable only when so specified in an individual order or delivery increment:

This requirement is a depot replenishment buy, a portion of which is or may be required to fill Direct Support System (DSS) requisitions. Shipment shall be made, as specified, to one or more of:

New Cumberland Army Depot  
Red River Army Depot  
Sharpe Army Depot

prior to shipments to any other depots as may be designated. When more than one depot is designated for DSS shipments, priority shipments will be made equally to each of the designated destinations.

[End of Clause]

Name of Offeror or Contractor: AXION CORPORATION

SECTION G - CONTRACT ADMINISTRATION DATA

PRON/										JOB					
LINE	AMS	CD/	OBLG							ORDER	ACCOUNTING		OBLIGATED		
<u>ITEM</u>	<u>MIPR</u>	<u>ACRN</u>	<u>STAT</u>	<u>ACCOUNTING CLASSIFICATION</u>					<u>NUMBER</u>	<u>STATION</u>	<u>AMOUNT</u>				
0001AA	EH386563EH	AA	2	97	X4930AC9D	6D	26KB	S20113		W56HZV	\$	84,900.00			
	060011														
											TOTAL	\$	84,900.00		
SERVICE										ACCOUNTING		OBLIGATED			
<u>NAME</u>	<u>TOTAL BY ACRN</u>		<u>ACCOUNTING CLASSIFICATION</u>							<u>STATION</u>	<u>AMOUNT</u>				
Army		AA	97	X4930AC9D	6D	26KB	S20113			W56HZV	\$	84,900.00			
											TOTAL	\$	84,900.00		

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SECTION H - SPECIAL CONTRACT REQUIREMENTS

	Regulatory Cite	Title	Date
H-1	252.225-7001	BUY AMERICAN ACT AND BALANCE OF PAYMENTS PROGRAM	APR/2003
H-2	252.225-7002	QUALIFYING COUNTRY SOURCES AS SUBCONTRACTORS	APR/2003
H-3	252.225-7009	DUTY-FREE-ENTRY--QUALIFYING COUNTRY SUPPLIES (END PRODUCTS AND COMPONENTS)	AUG/2000
H-4	252.231-7000	SUPPLEMENTAL COST PRINCIPLES	DEC/1991
H-5	252.246-7000	MATERIAL INSPECTION AND RECEIVING REPORT	MAR/2003
H-6	252.225-7036	BUY AMERICAN ACT--NORTH AMERICAN FREE TRADE AGREEMENT IMPLEMENTATION ACT--BALANCE OF PAYMENTS PROGRAM	APR/2003

(a) Definitions. As used in this clause-

- (1) "Component" means an article, material, or supply incorporated directly into an end product.
- (2) "Domestic end product" means-
  - (i) An unmanufactured end product that has been mined or produced in the United States; or
  - (ii) An end product manufactured in the United States if the cost of its qualifying country components and its components that are mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. The cost of components includes transportation costs to the place of incorporation into the end product and U.S. duty (whether or not a duty-free entry certificate is issued). Scrap generated, collected, and prepared for processing in the United States is considered domestic. A component is considered to have been mined, produced, or manufactured in the United States (regardless of its source in fact) if the end product in which it is incorporated is manufactured in the United States and the component is of a class or kind for which the Government has determined that-
    - (A) Sufficient and reasonably available commercial quantities of a satisfactory quality are not mined, produced, or manufactured in the United States; or
    - (B) It is inconsistent with the public interest to apply the restrictions of the Buy American Act.
- (3) "End product" means those articles, materials, and supplies to be acquired under this contract for public use.
- (4) "Foreign end product" means an end product other than a domestic end product.
- (5) "North American Free Trade Agreement (NAFTA) country" means Canada or Mexico.
- (6) "NAFTA country end product" means an article that-
  - (i) Is wholly the growth, product, or manufacture of a NAFTA country; or
  - (ii) In the case of an article that consists in whole or in part of materials from another country or instrumentality, has been substantially transformed in a NAFTA country into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was transformed. The term refers to a product offered for purchase under a supply contract, but for purposes of calculating the value of the end product includes services (except transportation services) incidental to its supply, provided that the value of those incidental services does not exceed the value of the product itself.
- (7) "Qualifying country" means any country set forth in subsection 225.872-1 of the Defense Federal Acquisition Regulation Supplement.
- (8) "Qualifying country component" means a component mined, produced, or manufactured in a qualifying country.
- (9) "Qualifying country end product" means-
  - (i) An unmanufactured end product mined or produced in a qualifying country; or
  - (ii) An end product manufactured in a qualifying country if the cost of the following types of components exceeds 50 percent of the cost of all its components:
    - (A) Components mined, produced, or manufactured in a qualifying country.
    - (B) Components mined, produced, or manufactured in the United States.
    - (C) Components of foreign origin of a class or kind for which the Government has determined that sufficient and reasonably available commercial quantities of a satisfactory quality are not mined, produced, or manufactured in the United States.
- (10) "United States" means the United States, its possessions, Puerto Rico, and any other place subject to its jurisdiction, but does not include leased bases or trust territories.

(b) This clause implements the Buy American Act (41 U.S.C. Section 10a-d), the Balance of Payments Program, and the North American Free Trade Agreement Implementation Act of 1993 (19 U.S.C. 3301 note). Unless otherwise specified, this clause applies to all items in the Schedule.

(c) The Contractor shall deliver under this contract only domestic end products unless, in its offer, it specified delivery of qualifying country, NAFTA country, or other foreign end products in the Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Program Certificate provision of the solicitation. If the Contractor certified in its offer that it will deliver a qualifying country end product or a NAFTA country end product, the Contractor shall deliver a qualifying country end product, a NAFTA country end product, or, at the Contractor's option, a domestic end product.

(d) The contract price does not include duty for end products or components for which the Contractor will claim duty-free entry.

(End of clause)

**Name of Offeror or Contractor:** AXION CORPORATION

H-7            52.204-4005            REQUIRED USE OF ELECTRONIC CONTRACTING  
(TACOM)

DEC/2002

(a) All contract awards, modifications and delivery orders issued by TACOM will be issued electronically. The contractor has the option to receive these actions either via the Worldwide Web (WWW) or Electronic Data Interchange (EDI). Many provisions and clauses appear "by reference," meaning only clause titles and regulation site are listed; their full texts can be found at the website <http://farsite.hill.af.mil/>

(b) In order to be eligible to receive an award under this solicitation, the successful offeror must be registered with the Department of Defense (DOD) Central Contractor Registration (CCR). The CCR registration process may be done electronically at the World Wide Web (WWW) site: <http://www.ccr.gov/>. (In order to be registered to use EDI, you must use the long form for registration. Certification information, including information on the EDI 838 TPP, must be furnished to the Contracting Officer within 60 calendar days after contract award to complete networking requirements within the Government.)

(c) Worldwide Web Distribution. The contractor will receive an electronic Notice of the Award, Modification, or Delivery Order via e-mail. If you choose the WWW option, you must download the file from the appropriate TACOM webpage:

Warren: [http://contracting.tacom.army.mil/awards\\_official.htm](http://contracting.tacom.army.mil/awards_official.htm)  
Rock Island: <http://aaais.ria.army.mil/AAIS/AWDINFO/index.htm>  
Picatinny: <http://procnet.pica.army.mil/Contracts/Index.htm>  
Red River Army Depot: <http://www.redriver.army.mil/contracting/Awards>  
Anniston Army Depot: <http://www.anadprocnet.army.mil>

(d) Electronic Data Interchange. If you choose to receive contract awards, modifications and delivery orders through EDI, they will be delivered electronically via the Federal Acquisition Network (FACNET). Federal Standard Version 3050 of Standard X12 from the American National Standards Institute (ANSI) will be used as the format for these electronic transactions.

(1) You must complete the EDI 838 Trading Partner Profile, and must agree (i) to subcontract with a DoD certified VAN or Value Added Service (VAS) provider, or (ii) to become DoD certified as a Value Added Network (VAN). The EDI 838 Training Partner Profile is contained in the basic CCR registration form and includes portions of the registration form which are titled "Optional".

(2) You must select a VAN from the official DoD approved list. DoD Certified VANs are listed at <http://www.acq.osd.mil/ec/ecip/index.htm> . If your VAN is later removed from the official list, or if you voluntarily drop your initially selected VAN, then you must switch to a VAN that remains on the official DoD approved list. You must maintain an active account on a DoD approved VAN for the entire duration of the contract, beginning no later than the 60th day after award.

(e) Unless otherwise specified elsewhere in the contract, all data items you are required to provide under this contract must be submitted electronically. Acceptable formats include:

(1) Microsoft\* 97 Office Products (TACOM can currently read OFFICE 97\* and lower.): Word, Excel, Powerpoint, or Access

(2) 100 OR 250 MEGABYTE ZIP\*-DISK, 3 1/2 INCH DISK, OR 650 MEGABYTE CD ROM

(3) E-MAIL (Maximum size of each e-mail message is be three and one-half (3.5) megabytes).

(4) Other electronic formats. Before submitting your data in any other electronic format, please e-mail the buyer identified on the face of the contract, with e-mail copy-furnished to amsta-idg@tacom.army.mil, to obtain a decision as to the format's acceptability. This e-mail must be received by the buyer not later than ten calendar days before the required data submission date.

NOTE: The above formats may be submitted in compressed form using self-extracting files.

(f) Additional information can be obtained by sending a message to: [acqcenweb@tacom.army.mil](mailto:acqcenweb@tacom.army.mil) or by calling (586) 574-7059.

[End of Clause]

H-8            52.246-4026            LOCAL ADDRESSES FOR DD FORM 250  
(TACOM)

MAR/2002

(a) The contractor must provide a copy of each Material Inspection and Receiving Report (DD 250) pertaining to this contract, to the addresses given below, using either of the following methods:

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(1) Our first preference is for you to use electronic mail (e-mail), using the following e-mail address:

DD250@tacom.army.mil

(2) Our second preference is for you to use data facsimile (datafax) transmission, using this fax number:

(586) 574-7552 and use "DD250 mailbox" in the "to:" block of your fax cover or header sheet.

In either method, do not mix DD250s from more than one contract in a single transmmission. That is, you may submit multiple DD250s in a single transmission, but they must all be against the same contract.

(b) These copies meet the requirements for the Purchasing Office copy and the Army Inventory Control Manager copy listed in tables 1 and 2 of DFARS Appendix F.

(c) The DD250 form may be found, in three different formats, on the World Wide Web at <http://web1.whs.osd.mil/icdhome/DD-0999.htm>

[End of Clause]



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SECTION I - CONTRACT CLAUSES

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address: <http://farsite.hill.af.mil/>

[End of Clause]

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
I-1	52.202-1	DEFINITIONS	DEC/2001
I-2	52.203-3	GRATUITIES	APR/1984
I-3	52.203-5	COVENANT AGAINST CONTINGENT FEES	APR/1984
I-4	52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT	JUL/1995
I-5	52.203-7	ANTI-KICKBACK PROCEDURES	JUL/1995
I-6	52.203-8	CANCELLATION, RESCISSION AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY	JAN/1997
I-7	52.203-10	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY	JAN/1997
I-8	52.203-12	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS	JUN/2003
I-9	52.204-4	PRINTING/COPYING DOUBLE-SIDED ON RECYCLED PAPER	AUG/2000
I-10	52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT	JUL/1995
I-11	52.211-5	MATERIAL REQUIREMENTS	AUG/2000
I-12	52.211-15	DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS	SEP/1990
I-13	52.215-2	AUDIT AND RECORDS - NEGOTIATIONS	JUN/1999
I-14	52.215-8	ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT	OCT/1997
I-15	52.215-14	INTEGRITY OF UNIT PRICES	OCT/1997
I-16	52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS	OCT/2000
I-17	52.222-1	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES	FEB/1997
I-18	52.222-4	CONTRACT WORK HOURS AND SAFETY STANDARDS ACT--OVERTIME COMPENSATION	SEP/2000
I-19	52.222-19	CHILD LABOR--COOPERATION WITH AUTHORITIES AND REMEDIES	SEP/2002
I-20	52.222-20	WALSH-HEALEY PUBLIC CONTRACTS ACT	DEC/1996
I-21	52.222-21	PROHIBITION OF SEGREGATED FACILITIES	FEB/1999
I-22	52.222-26	EQUAL OPPORTUNITY	APR/2002
I-23	52.222-35	AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA	DEC/2001
I-24	52.222-36	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES	JUN/1998
I-25	52.222-37	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS	DEC/2001
I-26	52.223-6	DRUG FREE WORKPLACE	MAY/2001
I-27	52.223-14	TOXIC CHEMICAL RELEASE REPORTING	AUG/2003
I-28	52.225-8	DUTY-FREE ENTRY	FEB/2000
I-29	52.225-13	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES	JUN/2003
I-30	52.226-1	UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES	JUN/2000
I-31	52.227-1	AUTHORIZATION AND CONSENT	JUL/1995
I-32	52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT	AUG/1996
I-33	52.229-3	FEDERAL, STATE, AND LOCAL TAXES	APR/2003
I-34	52.232-1	PAYMENTS	APR/1984
I-35	52.232-8	DISCOUNTS FOR PROMPT PAYMENT	FEB/2002
I-36	52.232-11	EXTRAS	APR/1984
I-37	52.232-17	INTEREST	JUN/1996
I-38	52.232-23	ASSIGNMENT OF CLAIMS	JAN/1986
I-39	52.232-25	PROMPT PAYMENT	FEB/2002
I-40	52.232-33	PAYMENT BY ELECTRONIC FUNDS TRANSFER--CENTRAL CONTRACTOR REGISTRATION	OCT/2003
I-41	52.233-1	DISPUTES	JUL/2002
I-42	52.233-1	DISPUTES (ALTERNATE I, dated Dec 1991)	JUL/2002
I-43	52.233-3	PROTEST AFTER AWARD	AUG/1996
I-44	52.242-12	REPORT OF SHIPMENT (REPSHIP)	JUN/2003
I-45	52.242-13	BANKRUPTCY	JUL/1995
I-46	52.243-1	CHANGES--FIXED-PRICE	AUG/1987
I-47	52.246-23	LIMITATION OF LIABILITY	FEB/1997
I-48	52.248-1	VALUE ENGINEERING	FEB/2000
I-49	52.249-1	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SHORT FORM)	APR/1984

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	Regulatory Cite	Title	Date
I-50	52.249-2	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE)	SEP/1996
I-51	52.249-8	DEFAULT (FIXED-PRICE SUPPLY AND SERVICE)	APR/1984
I-52	52.253-1	COMPUTER GENERATED FORMS	JAN/1991
I-53	252.203-7001	PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE CONTRACT-RELATED FELONIES	MAR/1999
I-54	252.204-7003	CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT	APR/1992
I-55	252.209-7000	ACQUISITION FROM SUBCONTRACTORS SUBJECT TO ON-SITE INSPECTION UNDER THE INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY	NOV/1995
I-56	252.209-7004	SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY per DoD interim rule, Federal Register 27 Mar 98	MAR/1998
I-57	252.211-7005	SUBSTITUTIONS FOR MILITARY OR FEDERAL SPECIFICATIONS AND STANDARDS	FEB/2003
I-58	252.215-7000	PRICING ADJUSTMENTS	DEC/1991
I-59	252.225-7004	REPORTING OF CONTRACT PERFORMANCE OUTSIDE THE UNITED STATES	APR/2003
I-60	252.225-7012	PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES	FEB/2003
I-61	252.225-7014	PREFERENCE FOR DOMESTIC SPECIALTY METALS (ALT 1)	APR/2003
I-62	252.225-7016	RESTRICTION ON ACQUISITION OF BALL AND ROLLER BEARINGS	APR/2003
I-63	252.225-7025	RESTRICTION ON ACQUISITION OF FORGINGS	APR/2003
I-64	252.225-7031	SECONDARY ARAB BOYCOTT OF ISRAEL	APR/2003
I-65	252.226-7001	UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES	SEP/2001
I-66	252.243-7001	PRICING OF CONTRACT MODIFICATIONS	DEC/1991
I-67	252.244-7000	SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (DoD CONTRACTS)	MAR/2000
I-68	52.219-4	NOTICE OF PRICE EVALUATION FOR HUBZONE SMALL BUSINESS CONCERNS	JAN/1999

(a) Definition. HUBZone small business concern, as used in this clause, means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

- (b) Evaluation preference.
- (1) Offers will be evaluated by adding a factor of 10 percent to the price of all offers, except-
- (i) Offers from HUBZone small business concerns that have not waived the evaluation preference;
- (ii) Otherwise successful offers from small business concerns;
- (iii) Otherwise successful offers of eligible products under the Trade Agreements Act when the dollar threshold for application of the Act is exceeded (see 25.402 of the Federal Acquisition Regulation (FAR)); and
- (iv) Otherwise successful offers where application of the factor would be inconsistent with a Memorandum of Understanding or other international agreement with a foreign government.

(2) The factor of 10 percent shall be applied on a line item basis or to any group of items on which award may be made. Other evaluation factors described in the solicitation shall be applied before application of the factor.

(3) A concern that is both a HUBZone small business concern and a small disadvantaged business concern will receive the benefit of both the HUBZone small business price evaluation preference and the small disadvantaged business price evaluation adjustment (see FAR clause 52.219-23). Each applicable price evaluation preference or adjustment shall be calculated independently against an offeror's base offer. These individual preference amounts shall be added together to arrive at the total evaluated price for that offer.

(c) Waiver of evaluation preference. A HUBZone small business concern may elect to waive the evaluation preference, in which case the factor will be added to its offer for evaluation purposes. The agreements in paragraph (d) of this clause do not apply if the offeror has waived the evaluation preference.

- [ ] Offer elects to waive the evaluation preference.
- (d) Agreement. A HUBZone small business concern agrees that in the performance of the contract, in the case of a contract for

(1) Services (except construction), at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern or employees of other HUBZone small business concerns;

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(2) Supplies (other than procurement from a nonmanufacturer of such supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern or other HUBZone small business concerns;

(3) General construction, at least 15 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns; or

(4) Construction by special trade contractors, at least 25 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns.

(e) A HUBZone joint venture agrees that in the performance of the contract, the applicable percentage specified in paragraph (d) of this clause will be performed by the HUBZone small business participant or participants;

(f) A HUBZone small business concern nonmanufacturer agrees to furnish in performing this contract only end items manufactured or produced by HUBZone small business manufacturer concerns. This paragraph does not apply in connection with construction or service contracts.

[End of Clause]

I-69      52.223-11      OZONE-DEPLETING SUBSTANCES      MAY/2001

(a) Definition. Ozone-depleting substance, as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR part 82 as--

(1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or

(2) Class II, including but not limited to, hydrochlorofluorocarbons.

(b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j(b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

WARNING: Contains (or manufactured with, if applicable) \_\_\_\_\_ \* \_\_\_\_\_, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

\*The Contractor shall insert the name of the substance(s).

[End of Clause]

I-70      52.244-6      SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS      APR/2003

(a) Definitions. As used in this clause--

(1) "Commercial item," as used in this clause, has the meaning contained in the clause at 52.202-1, Definitions.

(2) "Subcontract," as used in this clause, includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c)

(1) The contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (OCT 2000)(15U.S.C. 637(d)(2) and (3)), in all subcontracts that offer subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (APR 2002)(E.O. 11246);

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Dec 2001) (38 U.S.C. 4212(a));

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(iv) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998)(29 U.S.C. 793);

(v) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (APR 2003) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631) (flow down required in accordance with paragraph (d) of FAR clause 52.247-64).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimum number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

[End of Clause]

I-71      52.252-6      AUTHORIZED DEVIATIONS IN CLAUSES      APR/1984

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of (DEVIATION) after the date of the clause.

(b) The use in this solicitation or contract of any DoD FAR Supplement (DFARS) (48 CFR 2) clause with an authorized deviation is indicated by the addition of (DEVIATION) after the name of the regulation.

[End of Clause]

I-72      252.204-7004      REQUIRED CENTRAL CONTRACTOR REGISTRATION      NOV/2001

(a) Definitions. As used in this clause--

(1) Central Contractor Registration (CCR) database means the primary DoD repository for contractor information required for the conduct of business with DoD.

(2) Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet Information Services to identify unique business entities.

(3) Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by Dun and Bradstreet plus a 4-digit suffix that may be assigned by a parent (controlling) business concern. This 4-digit suffix may be assigned at the discretion of the parent business concern for such purposes as identifying subunits or affiliates of the parent business concern.

(4) Registered in the CCR database means that all mandatory information, including the DUNS number or the DUNS+4 number, if applicable, and the corresponding Commercial and Government Entity (CAGE) code, is in the CCR database; the DUNS number and the CAGE code have been validated; and all edits have been successfully completed.

(b)

(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee must be registered in the CCR database prior to award, during performance, and through final payment of any contract resulting from this solicitation, except for awards to foreign vendors for work to be performed outside the United States.

(2) The offeror shall provide its DUNS or, if applicable, its DUNS+4 number with its offer, which will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(3) Lack of registration in the CCR database will make an offeror ineligible for award.

(4) DoD has established a goal of registering an applicant in the CCR database within 48 hours after receipt of a complete and accurate application via the Internet. However, registration of an applicant submitting an application through a method other than the Internet may take up to 30 days. Therefore, offerors that are not registered should consider applying for registration immediately upon receipt of this solicitation.

(c) The Contractor is responsible for the accuracy and completeness of the data within the CCR, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to confirm on an annual basis that its information in the CCR database is accurate and complete.

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(d) Offerors and contractors may obtain information on registration and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at <http://www.ccr.gov>.

[End of Clause]

I-73      252.247-7023      TRANSPORTATION OF SUPPLIES BY SEA      MAY/2002

(a) Definitions. As used in this clause--

(1) Components means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) Department of Defense (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) Foreign flag vessel means any vessel that is not a U.S.-flag vessel.

(4) Ocean transportation means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) Subcontractor means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract. However, effective May 1, 1996, the term does not include a supplier, materialman, distributor, or vendor of commercial items or commercial components.

(6) Supplies means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) Supplies includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) U.S.-flag vessel means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b)

(1) The Contractor shall use U.S.-flag vessels when transporting any supplies by sea under this contract.

(2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessels if-

(i) This contract is a construction contract; or

(ii) The supplies being transported are-

(A) Noncommercial items; or

(B) Commercial items that-

(1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that--

(1) U.S.-flag vessels are not available for timely shipment;

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(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum--

(1) Type, weight, and cube of cargo;

(2) Required shipping date;

(3) Special handling and discharge requirements;

(4) Loading and discharge points;

(5) Name of shipper and consignee;

(6) Prime contract number; and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Division of National Cargo, Office of Market Development, Maritime Administration, U.S. Department of Transportation, Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information--

(1) Prime contract number;

(2) Name of vessel;

(3) Vessel flag of registry;

(4) Date of loading;

(5) Port of loading;

(6) Port of final discharge;

(7) Description of commodity;

(8) Gross weight in pounds and cubic feet if available;

(9) Total ocean freight in U.S. dollars; and

(10) Name of the steamship company.

(f) The Contractor shall provide with its final invoice under this contract a representation that to the best of its knowledge and belief--

(1) No ocean transportation was used in the performance of this contract;

(2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;

(3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-U.S.-flag ocean transportation; or

(4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format:

ITEM

CONTRACT

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DESCRIPTION	LINE ITEMS	QUANTITY	TOTAL
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(g) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

(h) In the award of subcontracts for the types of supplies described in paragraph (b)(2) of this clause, the Contractor shall flow down the requirements of this clause as follows:

(1) The Contractor shall insert the substance of this clause, including this paragraph (h) in all subcontracts that exceed the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation.

(2) The Contractor shall insert the substance of paragraphs (a) through (e) of this clause, and this paragraph (h), in subcontracts that are at or below the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation.

[End of Clause]

I-74	252.248-7000	PREPARATION OF VALUE ENGINEERING CHANGE PROPOSALS	MAY/1994
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Prepare Value Engineering Change Proposals, for submission pursuant to the VALUE ENGINEERING clause of this contract, in the format prescribed by the version of MIL-STD-973 in effect on the date of contract award.

[End of Clause]

I-75	52.204-4008 (TACOM)	REQUIRED USE OF ELECTRONIC DATA INTERCHANGE (EDI)	MAY/2000
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The Government reserves the right to commence issuing orders to the contract within 90 calendar days after contract award. Any modifications and any delivery orders will be delivered electronically to the contractor using Electronic Data Interchange (EDI) via the Federal Acquisition Network (FACNET). Version 3050 of Standard X12 from the American National Standards Institute (ANSI) will be used as the format for these electronic transactions.

[End of Clause]

I-76	52.204-4009 (TACOM)	MANDATORY USE OF CONTRACTOR TO GOVERNMENT ELECTRONIC COMMUNICATION	JUN/1999
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(a) All references in the contract to the submission of written documentation shall mean electronic submission. All electronic submissions shall be in the formats and media described in the "Electronic Quotations/Offers/Bids Required in Response to this Request for Quotations/Proposals/Bids" clause elsewhere in this document. (See Section K for commercial acquisitions, Section L for RFPs, and Section I for RFQs.)

(b) This shall include all written unclassified communications between the Government and the Contractor except contract awards and contract modifications which shall be posted on the internet. Return receipt shall be used if a commercial application is available. Classified information shall be handled in full accordance with the appropriate security requirements.

(c) In order to be contractually binding, all Government communications requiring a Contracting Officer signature must be sent from the Contracting Officer's e-mail address. The Contractor shall designate the personnel with signature authority who can contractually bind the contractor. All binding contractor communication shall be sent from this contractor e-mail address(es).

(d) Upon award, the Contractor shall provide the Contracting Officer with a list of e-mail addresses for all administrative and technical personnel assigned to this contract.

(e) Unless exempted by the Procuring Contracting Officer in writing, all unclassified written communication after contract award shall be transmitted electronically.

[End of Clause]

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SECTION J - LIST OF ATTACHMENTS

<u>List of</u> <u>Addenda</u>	<u>Title</u>	<u>Date</u>	<u>Number</u> <u>of Pages</u>	<u>Transmitted By</u>
Attachment 001	TECHNICAL DATA PACKAGE 19207 12355304	07-APR-2003		
Attachment 002	SPECIAL PACKAGING SHEETS AK SPI12173263 REV. A	10-MAY-1989	006	